

Savings Estimate for ENERGY STAR Qualified Light Bulbs



Results Overview

The ENERGY STAR models of your selected light bulbs will save approximately 84%. Each year you will save approximately 30,949 kWh of electricity and \$5,258. Over the life of the light bulbs you will save approximately \$77,766 in electricity costs and \$10,817 in equipment replacement costs. By choosing ENERGY STAR you will reduce emissions by approximately 47,662 pounds of carbon dioxide annually, which is equivalent to the emissions of 4.6 cars.

Results Detail

	Quantity	Annual Total					Life Cycle Total				% Electricity Savings with ENERGY STAR	Total additional purchase price	Simple payback period for additional initial cost (years)	Assumed equipment lifetime (years)
		Electricity cost savings	Electricity savings (kWh)	Electricity cost	Electricity consumption (kWh)	Emissions reduction (pounds of CO2)	Electricity cost savings	Electricity savings (kWh)	Avoided cost for replacement bulbs & labor	Net cost savings				
General Purpose CFL/LED (Omnidirectional)														
Bulb 1 (5.0 W LED replacing 40 W)	24	\$156	920	\$22	131	1,416	\$2,311	21,000	\$149	\$2,315	88%	\$145.20	0.9	22.8
Bulb 2 (6.0 W LED replacing 40 W)	24	\$152	894	\$27	158	1,376	\$2,245	20,400	\$149	\$2,249	85%	\$145.20	0.9	22.8
Bulb 3 (9.5 W LED replacing 60 W)	212	\$1,992	11,723	\$375	2,205	18,054	\$29,457	267,650	\$1,318	\$29,535	84%	\$1,240.20	0.6	22.8
Bulb 4 (13.0 W LED replacing 75 W)	53	\$611	3,598	\$128	754	5,541	\$9,041	82,150	\$330	\$8,706	83%	\$665.15	1.0	22.8
Bulb 5 (18.0 W LED replacing 100 W)	73	\$1,114	6,555	\$244	1,439	10,094	\$16,470	149,650	\$454	\$15,749	82%	\$1,175.30	1.0	22.8
LED flood/spot reflector														
Bulb 1 (10.0 W LED replacing 75 W)	87	\$1,052	6,192	\$162	953	9,536	\$15,559	141,375	\$6,830	\$21,211	87%	\$1,178.85	0.8	22.8
Bulb 2 (15.0 W LED replacing 90 W)	13	\$181	1,068	\$36	214	1,644	\$2,683	24,375	\$1,587	\$4,135	83%	\$133.90	0.5	22.8
Total	486	\$5,258	30,949	\$995	5,854	47,662	\$77,766	706,600	\$10,817	\$83,900	84%	\$4,684	2.2	-

Notes: Savings for ENERGY STAR lighting includes an avoided cost for replacements because efficient lighting typically lasts longer than conventional lighting. More efficient lighting releases less heat into the surroundings, so upgrading to ENERGY STAR lighting may also have an impact on your heating and cooling costs. Total additional purchase price is the incremental cost for ENERGY STAR equipment reduced by any rebate/incentive amount entered on Inputs tab. Life cycle cost savings are given in terms of present value based on a real discount rate of 4%. See General Assumptions tab to adjust the discount rate. Life cycle net cost savings = life cycle electricity cost savings + avoided replacement cost - additional purchase price. Simple payback calculation is based on total additional purchase price, annual electricity cost savings and annual bulb replacement costs.

If every American home replaced their 5 most frequently used light fixtures or the bulbs in them with ones that have earned the ENERGY STAR, we would save approximately \$8 billion each year in energy costs, and together we would prevent the greenhouse gases equivalent to the emissions from 10 million cars.

This calculator was developed by U.S. EPA and DOE to estimate the energy consumption and operating costs of light bulbs and the savings with ENERGY STAR. New ENERGY STAR qualified light bulbs are compared to the average available new conventional light bulbs. Actual savings may vary based on use and other factors. [See www.energystar.gov](http://www.energystar.gov) for information on other ENERGY STAR products.